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July 16, 2019

Ms. Marlene H. Dortch, Secretary  
Federal Communications Commission  
445 Twelfth Street, S.W.  
Washington, D.C., 20554

Re: Expanding Flexible Use of the 3.7 to 4.2 GHz Band, GN Docket No. 18-122

Dear Ms. Dortch:

By this letter, AT&T responds to the C-Band Alliance (“CBA”) *ex parte* submission of June 10, 2019, detailing CBA’s proposal for the auctioning of spectrum in the 3.7-4.2 GHz band.<sup>1</sup> AT&T is pleased to see that CBA has moved from its original concept of bilateral contracts for license rights to the idea of a more transparent and efficient auction approach. It is disappointing, however, that rather than simply offering to conduct a straight forward, tried-and-true uniform price clock auction, they have contrived an unproven, fiendishly complex yet structurally incomplete, second-price single-round sealed bid process. Indeed, CBA’s proposed process of determining the winning bids—a critical component for bidders to construct a bidding strategy—remains entirely opaque. As discussed below, this proposed process would create enormous uncertainty, provide no price discovery, result in enormous burdens and complexity for bidders, invite strategic bidding, and lead to unpredictable and potentially unfair outcomes for bidders, as well as possibly resulting in a failed auction or unsold licenses. Commenters have pointed out that the proposal seems designed chiefly to maximize profits for CBA.<sup>2</sup> Moreover, all parties

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<sup>1</sup> See Letter from Henry Gola, counsel to CBA, to Marlene H. Dortch, Secretary, Federal Communications Commission, GN Docket No. 18-122 (dated June 10, 2019) (“*CBA Auction Ex Parte*”); see also “C-Band Alliance Filing on Proposed Commercial Auction Process,” Exhibit B to *CBA Auction Ex Parte* (“*CBA Auction Plan*”); Letter from Bill Tolpegin, Chief Executive Officer, C-Band Alliance, to Marlene H. Dortch, Secretary, Federal Communications Commission, GN Docket No. 18-122 (dated June 12, 2019) (“*CBA Supplemental Ex Parte*”); “FUEL for 5G: Flexible Use and Efficient Licensing,” Exhibit to *CBA Supplemental Ex Parte* (“*[Auction]omics White Paper*”).

<sup>2</sup> Comments of Dynamic Spectrum Alliance, GN Docket No. 18-122 at 9 (July 3, 2019) (noting “[j]udging by the CBA’s recent private auction proposal, the impact will be skewed to maximize its own auction revenues”); Comments of Competitive Carriers Association, GN Docket No. 18-122 at 9 (July 3, 2019) (stating “CBA would have the Commission jettison these rules in favor of a CBA-run auction that may lack some, or all, of the safeguards that the Commission has repeatedly said are critical to free and fair competitive bidding”).

that have commented on the proposal oppose it.<sup>3</sup> To go down this road would merely invite litigation and delay.

The big picture here is clear. The U.S. needs to make substantial amounts of mid-band spectrum available to maintain its lead in the race to 5G. CBA has demonstrated that the 3.7-4.2 band is perhaps the only such spectrum that can be made available in the short term. While there is some disagreement over whether this reallocated spectrum should be offered through a private sale process or by the Federal Communications Commission (“Commission” or “FCC”) itself, there is general consensus that the sale process should be a fair, transparent auction that serves the public policy objectives of Section 309(j). The Commission has conducted successful auctions using relatively simple, proven auction models, including clock auctions. This year alone it has successfully conducted two such auctions and is working on plans for a third. There is no need to depart from this tried and true approach.

The Commission, the communications industry, and a battery of economic advisors and consultants—including [Auction]omics<sup>4</sup>—have spent years and invested substantial resources to develop and refine a system of competitive bidding for spectrum licenses that is transparent, efficient, and meets the requirements of the Communications Act.<sup>5</sup> The Commission’s auction process and algorithms are exhaustively documented, well-understood and administratively simple, encouraging broad participation by a variety of incumbents, new entrants, and designated entities. The Commission’s auctions have resulted in billions of dollars of revenue for the U.S. Treasury and rapidly brought hundreds of megahertz of prime spectrum into commercial use, all without promoting uneconomic and destructive bidding. Against this long, successful, and proven history, CBA now proposes the use of a complex, and untested auction system—a competitive bidding format that would overturn years of work with the only rationale seemingly being the maximization of revenues for CBA’s members.

In a typical Commission uniform-price ascending clock auction, bidders are offered generic licenses at a uniformed price for any given round—the so called “clock price.” Auction

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<sup>3</sup> *Id.*, see also Letter from Steve B. Sharkey, Vice President, Government Affairs, T-Mobile, to Marlene H. Dortch, Secretary, Federal Communications Commission, GN Docket No. 18-122 (dated July 12, 2019) (“*T-Mobile Auction Ex Parte*”) (noting CBA auction proposal would “involve a complex auction process that would create opportunities for predatory bidding and deter participation”; “place control of, and direct the financial gains from, terrestrial use of the C-band in the hands of only a few satellite operators”; and, “supposedly address issues that do not exist such as the ‘exposure problem’”); Letter from Edward D. Moise, Principal, Moise Advisory, to Marlene H. Dortch, Secretary, Federal Communications Commission, GN Docket No. 18-122 (dated July 1, 2019) (“*Moise Advisory Letter*”); Allevan, Monica, “CBA proposes FUEL auction process for C-band,” *Fierce Wireless* (Jun. 11, 2019) (quoting Michael Calabrese, director of the Wireless Future Project at Open Technology Institute as stating “CBA’s auction plan should be dead on arrival”).

<sup>4</sup> See, e.g., Auctionomics and Power Auctions, “Incentive Auction Rules Option and Discussion” (Sept. 12, 2012); available at: [https://transition.fcc.gov/Daily\\_Releases/Daily\\_Business/2012/db1002/FCC-12-118A2.pdf](https://transition.fcc.gov/Daily_Releases/Daily_Business/2012/db1002/FCC-12-118A2.pdf) (last visited July 8, 2019).

<sup>5</sup> 47 U.S.C. §309(j)(3)(B)-(C) (requiring the Commission to adopt auction procedures “disseminat[e] licenses among a wide variety of applicants” and to “recover[] for the public a portion of the value of the public spectrum resource made available for commercial use”).

participants bid the amount of blocks they would be willing to buy at that uniform price. As the auction proceeds, the clock price increases, bidders gradually lower their demand in the face of increased prices, and the auction closes when aggregate bidder demand decreases to or below available supply. Not only does this format provide price discovery that is valuable to avoid massive pricing disparities between licenses and overbidding, the format provides flexibility for bidders to expand into areas where demand is below their initial expectations, or retreat from areas where demand exceeds their initial expectations.

CBA's proposed second-price, sealed bid combinatorial auction, on the other hand, allows for no price discovery as bidders in a sealed bid auction have one and only one opportunity to submit a bid. Moreover, under the proposed combinatorial auction, bidders will have to price license packages under a range of combinatorial variations, like adding additional blocks within a market, or adding or deleting markets. Instead of sequentially expressing their demand, bidders must map out all possible variations, price them, and submit them in a single-round, sealed format. Further complicating matters, winning bidders do not pay what they bid—under a second-price auction, the price a bidder pays is the price of the second highest bid. Once bids are submitted, CBA would determine via an algorithm designed and controlled by them which of the disparate bids is in fact the winning bid for each market and license. This key component of any auction structure remains completely opaque.

CBA has not advanced any compelling argument why its proposal to conduct an auction of C-band spectrum should deviate from established norms. Instead, CBA wrongfully implies that the proposed format has gained acceptance internationally<sup>6</sup> and incorrectly suggests that its proposal for a second-price, sealed bid combinatorial auction has advantages over conventional uniform-price clock auctions. Specifically, CBA claims its proposal has the benefit of: (i) speed, which will “allow the CBA to announce winning bidders within 2-4 weeks”; (ii) efficiency, which “reduces bid preparation time, minimizes bidding errors, and allows values rather than strategic calculations to determine the outcome”; and (iii) flexibility, which “is designed to allow successful participation by entities of every size.”<sup>7</sup> Left unstated is perhaps the true aim of the proposal—creating an environment encouraging strategic and uneconomic overbidding, thereby maximizing the revenues of CBA's membership.

As for CBA's claims that its sealed-bid combinatorial auction design has speed advantages, CBA seems narrowly focused on a single part of the auction—the auctioneer's evaluation of the submitted bids. This ignores, given that CBA's proposal is a novel one, the time that would be required to develop bid evaluation metrics, auditing and transparency protocols, and educating bidders on the system. CBA is also ignoring the very, very substantial burden being placed on

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<sup>6</sup> CBA *Supplemental Ex Parte* at 2.

<sup>7</sup> CBA *Auction Plan* at 1. CBA also makes a claim of “fairness,” stating its auction “is purposefully simple to encourage the greatest range of participants,” which seems to reiterate a subset of its “efficiency” points, and a claim of “effectiveness,” stating its auction will permit “winners [to] begin the 5G build-out process within 18 months of a final FCC order in key economic areas of the U.S.,” which seems to reiterate its basic point with respect to “speed.”

bidders to prepare for the auction. If a bidder desired to bid, hypothetically, for a nationwide footprint in a range of block quantities, the bidder would have to evaluate the marginal cost of adding or subtracting each block in that range in each individual market. This calculus could change even for a specific PEA if, for example, the party is looking at adding a fourth license versus adding a second license. For a range of one to four blocks, this exercise amounts to 1,664 individual valuations. AT&T believes it would require months to prepare a bid submission under these circumstances, that bidding errors could easily be introduced, and that the results could not be fully trusted for a sealed-bid submission. In other words, AT&T categorically does not concur with CBA's view that its proposed auction format is efficient because it "reduces bid preparation time [and] minimizes bidding errors."<sup>8</sup>

Even more critically, AT&T disagrees with CBA that the format "allows values rather than strategic calculations to determine the outcome."<sup>9</sup> First, because this spectrum has different propagation characteristics than spectrum used in 4G networks, and ideally will be used in larger contiguous channels for a new technology, valuation will be difficult for bidders, as analogies to other auction valuations are unlikely to be reliable. This issue is compounded by the fact that unlike an ascending price clock auction, there would be no opportunity for price discovery in CBA's sealed-bid approach. Accordingly, the outcome is far less likely to be based on "values." In addition, the second-price rule is likely to promote strategic bidding. In a second-price auction, the price the winning bidder pays is not its own bid, but is a function of what others bid. Accordingly, some bidders might want to "price" their competitors to avoid allowing them to walk away with spectrum at rock bottom prices. As a concrete example, in the Canadian 600 MHz combinatorial clock auction (an auction format Canada has since moved away from), TELUS paid CAD \$2.35 for 397M MHz-POPs, while Rogers paid CAD \$1.71 for 1,009M MHz-POPs.<sup>10</sup> This pricing disparity appears to be an indicator of strategic behavior, and belies CBA's suggestion that its proposal is less subject to gaming than the uniform-price auctions conducted by the Commission.

As far as CBA's claim of "flexibility" and that its auction proposal "is designed to allow successful participation by entities of every size," it is instructive that AT&T and T-Mobile, which are typically considered large bidders, and Moise Advisory, apparently acting on behalf of smaller bidders, all oppose the CBA proposal.<sup>11</sup> Balanced against this, no less than 29 different

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<sup>8</sup> *CBA Auction Plan* at 1.

<sup>9</sup> *Id.*

<sup>10</sup> Government of Canada, 600 MHz Auction – Final Results; available at: <https://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf11499.html> (last visited July 9, 2019).

<sup>11</sup> See, *T-Mobile Auction Ex Parte*; *Moise Advisory Letter*.

bidders were able to successfully obtain licenses in the 24 GHz auction and 30 different bidders obtained licenses in the AWS-3 auction.<sup>12</sup>

To the extent that a few other countries have experimented with combinatorial auction that use a second-price rule, both Canada and Mexico have since moved away from that format in favor of tried and true uniform-price auctions similar to what the Commission has used. Mexico, for example, used a combinatorial clock auction (“CCA”) for its AWS-1 and AWS-3 spectrum auctions in 2016, but shifted to a uniform-price auction for its 2018 2.6 GHz auction.<sup>13</sup> Canada used a CCA design for its 700 MHz (2014), 2.5 GHz (2015), and 600 MHz auctions (2018), but explicitly rejected using a CCA for its 3.5 GHz auction. In rejecting the use of a combinatorial auction design, Innovation, Science and Economic Development Canada (“ISED”)—the Canadian regulatory authority—made several key findings. First, “given significant stakeholder support,” ISED “committed to propose an auction format that allows for price discovery” and “eliminated the sealed-bid auction format as a consideration for the upcoming 3500 MHz auction” because it “agree[d] that given the expected high demand for licences in the 3500 MHz band, reducing uncertainty concerning the value of the spectrum being offered would be of significant benefit to potential bidders.”<sup>14</sup> Second, ISED noted that “the number of licences and products that will be available for the 3500 MHz auction significantly exceeds the number of licences available in previous Canadian CCA auctions,” and found the number of products “would introduce the computational risks to using the CCA format” and “would also introduce complexity for bidders.”<sup>15</sup> Both of the factors that led ISED to conclude a CCA was inappropriate for Canada to apply with equal, or greater, force in the United States. Not only

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<sup>12</sup> “Auction of 24 GHz Upper Microwave Flexible Use Service Licenses Closes; Winning Bidders Announced for Auction 102,” *FCC Public Notice*, DA 19-485 (rel. June 3, 2019); “Auction of Advanced Wireless Services (AWS-3) Licenses Closes; Winning Bidders Announced for Auction 97,” *FCC Public Notice*, DA 15-131 (rel. Jan. 30, 2015).

<sup>13</sup> Pautasio, Leticia, “México fija en US\$ 56,6 millones el precio de AWS-1; US\$ 3,9 millones para la sub-banda AWS-3,” *TeleSemana.com* (undated); *available at*: <https://www.telesemana.com/blog/2015/11/23/mexico-fija-en-us-566-millones-el-precio-de-aws-1-us-39-millones-para-la-sub-banda-aws-3/> (last visited July 8, 2019).

<sup>14</sup> Innovation, Science and Economic Development Canada, Consultation on a Policy and Licensing Framework for Spectrum in the 3500 MHz Band, SLPB-002-19 at 15-16 ¶64 (June 2019); *available at*: [https://www.ic.gc.ca/eic/site/smt-gst.nsf/vwapj/SLPB-002-19EN.pdf/\\$file/SLPB-002-19EN.pdf](https://www.ic.gc.ca/eic/site/smt-gst.nsf/vwapj/SLPB-002-19EN.pdf/$file/SLPB-002-19EN.pdf) (last visited July 8, 2019).

<sup>15</sup> *Id.* at 16 ¶65; *see also* Innovation, Science and Economic Development Canada, Decision on Revisions to the 3500 MHz Band to Accommodate Flexible Use and Preliminary Decisions on Changes to the 3800 MHz Band, SLPB-001-19 at 28 ¶124 (June 2019) (stating “there are clear benefits with respect to reducing uncertainty about value of spectrum” and “[g]iven the support expressed in the comments received, proposals developed under the consultation on a policy and licensing framework will include an auction format with price discovery”); *available at*: [https://www.ic.gc.ca/eic/site/smt-gst.nsf/vwapj/SLPB-001-19EN.pdf/\\$file/SLPB-001-19EN.pdf](https://www.ic.gc.ca/eic/site/smt-gst.nsf/vwapj/SLPB-001-19EN.pdf/$file/SLPB-001-19EN.pdf) (last visited July 8, 2019).

should there be a large supply of license products,<sup>16</sup> but the U.S. has never held a mid-band auction for 5G spectrum, and there is a great deal of uncertainty regarding the value of the spectrum that militates in favor of enhanced price discovery.<sup>17</sup>

In sum, AT&T strongly opposes the use of CBA's proposed combinatorial, sealed-bid, second-price auction format. There is no justification—much less any compelling justification—for departing from the uniform-price clock auction format that has become the standard for spectrum auctions conducted by the Commission. No party other than CBA would benefit with any reasonable certainty from CBA's proposed approach. The Commission's uniform-price, ascending clock format offers efficiency, transparency, reasonable price discovery and fairness, and bidders—both large and small and national and regional—have invested time and resources to become familiar and adept at bidding using the system. Moreover, the uniform-price clock auction has also produced lucrative auction outcomes. Regardless of whether the spectrum is sold in a private or public sale, the Commission should not depart from this model here.

Should any questions arise concerning this *ex parte*, please do not hesitate to contact the undersigned at (202) 457-2055.

Sincerely,

/s/ Michael P. Goggin  
Michael P. Goggin

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<sup>16</sup> The FCC has recently adopted a building block approach to spectrum auctions with smaller, “partial economic area” (“PEA”) or county markets and blocks that can be aggregated for broadband use. *See, e.g.*, Auction 101 (28 GHz, county licensing), Auction 102 (24 GHz, PEA licensing), Auction 103 (Upper 37 GHz, 39 GHz & 47 GHz auction, PEA licensing). While CBA has proposed 20 MHz channelization, AT&T believes the Commission should mandate 10 MHz block sizes. Given the efficiency benefits CBA claims from its proposed auction format, the only rationale for 20 MHz block sizes would be to exacerbate the potential for a bidding war as carriers seek to create large bandwidth licenses.

<sup>17</sup> Where similar spectrum has been sold in other countries, final auction prices have varied widely, between \$0.04 (Ireland) and \$0.42 (Italy).